

# Appendix A: ClustalW Alignment of SEQ ID NO: 36 (CG55069-01) and SEQ ID NO: 38 (CG55069-02)

CG55069-01 1 ADVKERRPVCSLTKSREKERKVTSSADHEECRVPTQKSYSSSETLKAFDHDSSRLLYG 60  
CG55069-02 1 ADVKERRPVCSLTKSREKERKVTSSADHEECRVPTQKSYSSSETLKAFDHDSSRLLYG 60

CG55069-01 61 HRRKDLVHRAEDFTQQQHFTRQGVCEPATRRGLAFCAEMGLPHRGVYSIAOSDADT 120  
CG55069-02 61 HRRKDLVHRAEDFTQQQHFTRQGVCEPATRRGLAFCAEMGLPHRGVYSIAOSDADT 120

CG55069-01 121 ENEAVNISEHNAHRLWROGVISORSSCLSSASHSALTLDTEHENKSDSENEQPAHQGQS 180  
CG55069-02 121 ENEAVNISEHNAHRLWROGVISORSSCLSSASHSALTLDTEHENKSDSENEQPAHQGQS 180

CG55069-01 181 TLQPLPPSHKQSAQHPSITSLURHSLTIRRNQSPAPPAALPAELQTTPEVOLQDSWV 240  
CG55069-02 181 TLQPLPPSHKQSAQHPSITSLURHSLTIRRNQSPAPPAALPAELQTTPEVOLQDSWV 240

CG55069-01 241 LQSHVPLESRHFLFKTOTGTTPLFSTATPOVTMASSQVSPPTPLPRLPRLTSLRSARFKFK 300  
CG55069-02 241 LQSHVPLESRHFLFKTOTGTTPLFSTATPOVTMASSQVSPPTPLPRLPRLTSLRSARFKFK 300

CG55069-01 301 SSKYGSWCKTALCAVGVSVLLAILLSVFIAHMLFGLHWQLQQTENDTFENGKVNSDTMTPT 360  
CG55069-02 301 SSKYGSWCKTALCAVGVSVLLAILLSVFIAHMLFGLHWQLQQTENDTFENGKVNSDTMTPT 360

CG55069-01 361 NTYSLPSSDQHLQOFTQEHNTIDSOELDIOERRAIOEIPPOIFWRSOLFIDOPQFLKFNH 420  
CG55069-02 361 NTYSLPSSDQHLQOFTQEHNTIDSOELDIOERRAIOEIPPOIFWRSOLFIDOPQFLKFNH 420

CG55069-01 421 SLQKDALIGVYGRKLPSSHTQSSPVYDFVELLDUSKLIAREQRSLLETERAQRARSVS 480  
CG55069-02 421 SLQKDALIGVYGRKLPSSHTQSSPVYDFVELLDUSKLIAREQRSLLETERAQRARSVS 480

CG55069-01 481 LHEAOFIOYLDGSIWHLAFYDNGENAEQVSFNTIVIESVVECFRNCHGNGECVSGTCHCF 540  
CG55069-02 481 LHEAOFIOYLDGSIWHLAFYDNGENAEQVSFNTIVIESVVECFRNCHGNGECVSGTCHCF 540

CG55069-01 541 PGFLQPDSCRAACPVLCSGNGQYSKORCLCFSGWGTGECDDVPTQCIDFQCGGRCICIMC 600  
CG55069-02 541 PGFLQPDSCRAACPVLCSGNGQYSKORCLCFSGWGTGECDDVPTQCIDFQCGGRCICIMC 600

CG55069-01 601 SCACSSQVKQESCEADCDIPGCSNHGVCIHGECHCSPGWQSNCEILKTMCPDQCSGHC 660  
CG55069-02 601 SCACSSQVKQESCEADCDIPGCSNHGVCIHGECHCSPGWQSNCEILKTMCPDQCSGHC 660

CG55069-01 661 TVLQESQSCDCHPWTOFDCSHEICSVDCQSHOVCMQOTCRCEEGWTFACHQACHPRC 720  
CG55069-02 661 TVLQESQSCDCHPWTOFDCSHEICSVDCQSHOVCMQOTCRCEEGWTFACHQACHPRC 720

CG55069-01 721 AEHGTCKDQKCECSQWNGEHTIAHYLDRIVEDEKIGVEEGCFGLNSHGRCGLDQNGGH 780  
CG55069-02 721 AEHGTCKDQKCECSQWNGEHTIAHYLDRIVEDEKIGVEEGCFGLNSHGRCGLDQNGGH 780

CG55069-01 781 QVCQPGWKAAGCDVAMETLCTDSKHEDGDLIDCHMDPCCLOSCQNGFYCRGLPDPQDI 840  
CG55069-02 781 QVCQPGWKAAGCDVAMETLCTDSKHEDGDLIDCHMDPCCLOSCQNGFYCRGLPDPQDI 840

CG55069-01 841 ISQSLQSPSQAAKSFYDRISFLIOSDSTHVIPGESPPHCKSLASVIRGQVLTADGTPFLIG 900  
CG55069-02 841 ISQSLQSPSQAAKSFYDRISFLIOSDSTHVIPGESPPHCKSLASVIRGQVLTADGTPFLIG 900

CG55069-01 901 VHVSPFFHVPEYGYTITRODGMFDLVAKOGASLTIVFERSPELTQYHTVWIPWHVPEYVMDT 960  
CG55069-02 901 VHVSPFFHVPEYGYTITRODGMFDLVAKOGASLTIVFERSPELTQYHTVWIPWHVPEYVMDT 960

CG55069-01 961 LVMEKEENDIPSCDLSGFVRPNFIIVSSPLSTFFRSSPDSPIIPETQVLHEETTIPQTD 1020  
CG55069-02 961 LVMEKEENDIPSCDLSGFVRPNFIIVSSPLSTFFRSSPDSPIIPETQVLHEETTIPQTD 1020

CG55069-01 1021 LKLSVLSRAAGYKSVLKITMTOSIIFPHLMKVHLMVAVQRLFOKWFPASPHLAYTFIW 1080  
CG55069-02 1021 LKLSVLSRAAGYKSVLKITMTOSIIFPHLMKVHLMVAVQRLFOKWFPASPHLAYTFIW 1080

CG55069-01 1081 DKTDAYHKKVYGLSEAVVSVQYEVESCLDLTLWEKRTALQOVELDASHMGGGTLDKHHV 1140  
CG55069-02 1081 DKTDAYHKKVYGLSEAVVSVQYEVESCLDLTLWEKRTALQOVELDASHMGGGTLDKHHV 1140

CG55069-01 1141 LDVQNGILYKGIQENQFISQGFVYSSIMGNORRRSISCFCHQOQADENKLLAFVALACC 1200  
CG55069-02 1141 LDVQNGILYKGIQENQFISQGFVYSSIMGNORRRSISCFCHQOQADENKLLAFVALACC 1200

CG55069-01 1201 IDGSLYVDQFHYVRRIFPSQHVTSVLELRHKDFRHSNHPAHRVYLATDFVTODLVYSDTN 1260  
CG55069-02 1201 IDGSLYVDQFHYVRRIFPSQHVTSVLELRHKDFRHSNHPAHRVYLATDFVTODLVYSDTN 1260

CG55069-01 1261 TRRIVRPSLTKAKDLTKNAEVAQTGEQCLPFDEARCGDGGKAVEATLMSPKGMADVKN 1320  
CG55069-02 1261 TRRIVRPSLTKAKDLTKNAEVAQTGEQCLPFDEARCGDGGKAVEATLMSPKGMADVKN 1320

CG55069-01 1321 SLIYFYDQTHIRKVDQNGIISLLOSNDLTSARPLTCDTSMHIISQVLEWPTDLAINPMD 1380  
CG55069-02 1321 SLIYFYDQTHIRKVDQNGIISLLOSNDLTSARPLTCDTSMHIISQVLEWPTDLAINPMD 1380

CG55069-01 1381 NSIYVLDHNVVLIQITENRQVRIAAGRFMHQCVQVPEYVPGKHAQVOTLESATAIAVSYSG 1440  
CG55069-02 1381 NSIYVLDHNVVLIQITENRQVRIAAGRFMHQCVQVPEYVPGKHAQVOTLESATAIAVSYSG 1440

CG55069-01 1441 VLYITETDEKKINRIROVITDGEISLVAGIPECECDKHANDCCYQSGDQYAKDAKL 1500  
CG55069-02 1441 VLYITETDEKKINRIROVITDGEISLVAGIPECECDKHANDCCYQSGDQYAKDAKL 1500

CG55069-01 1501 SSLLAASPDTLYIADLGNIRIAYSEKHPLLHSMNHYEVASPTDQELVIFDINGTHQYTV 1560  
CG55069-02 1501 SSLLAASPDTLYIADLGNIRIAYSEKHPLLHSMNHYEVASPTDQELVIFDINGTHQYTV 1560

CG55069-01 1561 SLVTDGVLHYFYSYNDNDITAVTDSHGNTLIRREDPNRMPVRYVSPDHOVILWLTIGTHG 1620  
CG55069-02 1561 SLVTDGVLHYFYSYNDNDITAVTDSHGNTLIRREDPNRMPVRYVSPDHOVILWLTIGTHG 1620

CG55069-01 1621 LKGMTAQGLELVFTYHGNSGLLAKSDETGWTTFFDYDSEGLTHVTFPTGVVTHLHGD 1680  
CG55069-02 1621 LKGMTAQGLELVFTYHGNSGLLAKSDETGWTTFFDYDSEGLTHVTFPTGVVTHLHGD 1680

CG55069-01 1681 MDKAITVDIESSSREEDYSITSNLSSISDFYTMVQDQLRNSVOIGYDGLRIIYASOLD 1740  
CG55069-02 1681 MDKAITVDIESSSREEDYSITSNLSSISDFYTMVQDQLRNSVOIGYDGLRIIYASOLD 1740

CG55069-01 1741 HYQTEPHVLAQTAHPTVAKRHMTLPGEHQGLVWEVRFRKEQAQKVVVQKRLRVHGRHL 1800  
CG55069-02 1741 HYQTEPHVLAQTAHPTVAKRHMTLPGEHQGLVWEVRFRKEQAQKVVVQKRLRVHGRHL 1800

CG55069-01 1801 LSVDPDRITTEKIVDDHRKFLIRIAYDTSQHPITLWLPSSKLMVAHVTVYSTGOIASIQ 1860  
CG55069-02 1801 LSVDPDRITTEKIVDDHRKFLIRIAYDTSQHPITLWLPSSKLMVAHVTVYSTGOIASIQ 1860

CG55069-01 1861 SITSEKVDYDQQRIVSRVFAQKRTWSYTYLEKSMVLLHLSQKQVIFSYDMWDRLSAITM 1920  
CG55069-02 1861 SITSEKVDYDQQRIVSRVFAQKRTWSYTYLEKSMVLLHLSQKQVIFSYDMWDRLSAITM 1920

CG55069-01 1921 PSVAHHTMOTIRSIOGVYNIYPPESNASIITDYNEEQLLQTAFLQTSRVLFRYRQT 1980  
CG55069-02 1921 PSVAHHTMOTIRSIOGVYNIYPPESNASIITDYNEEQLLQTAFLQTSRVLFRYRQT 1980

CG55069-01 1981 RLSEILYDSTRVSFTYDQVLETVNLOSDFICTIRYRQIGPLIDQIFRPSEDGMVN 2040  
CG55069-02 1981 RLSEILYDSTRVSFTYDQVLETVNLOSDFICTIRYRQIGPLIDQIFRPSEDGMVN 2040

CG55069-01 2041 ARFDYSYDMSFRVTSMDQVNIETPLPIDLYQFDDISQVVEQFGKFGVYVDINQIISTAV 2100  
CG55069-02 2041 ARFDYSYDMSFRVTSMDQVNIETPLPIDLYQFDDISQVVEQFGKFGVYVDINQIISTAV 2100

CG55069-01 2101 NTYTKHFDAGORHIEIQEIFRSLMWYITIQVDMGRVTKREIEIOFPANTTKYAYEYDV 2160  
CG55069-02 2101 NTYTKHFDAGORHIEIQEIFRSLMWYITIQVDMGRVTKREIEIOFPANTTKYAYEYDV 2160

CG55069-01 2161 DQQLQTVYLIHERIMWRYNVDLNGHLHLRPSHSARILPLRYDLRDKITRLQGVQVRLDE 2220  
CG55069-02 2161 DQQLQTVYLIHERIMWRYNVDLNGHLHLRPSHSARILPLRYDLRDKITRLQGVQVRLDE 2220

CG55069-01 2221 DFLROROTEIFEYSSKGLLTRVYSKGSOWTVIYKVDOLGRVYSKTSLOQHLQFFYADLT 2280  
CG55069-02 2221 DFLROROTEIFEYSSKGLLTRVYSKGSOWTVIYKVDOLGRVYSKTSLOQHLQFFYADLT 2280

CG55069-01 2281 VPTRITHVYNNSSSEITSLYVDLQGLHFAHEISSODEFYIASDNTOTFLAVPSSNOLMLK 2340  
CG55069-02 2281 VPTRITHVYNNSSSEITSLYVDLQGLHFAHEISSODEFYIASDNTOTFLAVPSSNOLMLK 2340

CG55069-01 2341 QIQYTAQYELFYDSNIDPQLVIGFHGGLYDPLTKLIHFGEDYDILAGRWTTPDIEIWK 2400  
CG55069-02 2341 QIQYTAQYELFYDSNIDPQLVIGFHGGLYDPLTKLIHFGEDYDILAGRWTTPDIEIWK 2400

CG55069-01 2401 IGRDPAFPHLYMRRNNPASKIHVDYDITDYNHSLVTFQPHLHNAIPGFPPVPRFDTTEE 2460  
CG55069-02 2401 IGRDPAFPHLYMRRNNPASKIHVDYDITDYNHSLVTFQPHLHNAIPGFPPVPRFDTTEE 2460

CG55069-01 2461 SYELVKSQOQDDIPPIFGVQOQVAKAKAFLSLOKMAEVQVSRRAAGQASWLWATVKS 2520  
CG55069-02 2461 SYELVKSQOQDDIPPIFGVQOQVAKAKAFLSLOKMAEVQVSRRAAGQASWLWATVKS 2520

CG55069-01 2521 LIGKQVMILAYSQQRVQTHVLIHAEQCIKVAAYLVHNAFYLEHLHFTIEOKDTHYFIRTT 2580  
CG55069-02 2521 LIGKQVMILAYSQQRVQTHVLIHAEQCIKVAAYLVHNAFYLEHLHFTIEOKDTHYFIRTT 2580

CG55069-01 2581 PESDLOTLRLTSORKALENGINVTYSQSTTVVNGRTRAFADVEMOGALALHVRVOMTLD 2640  
CG55069-02 2581 PESDLOTLRLTSORKALENGINVTYSQSTTVVNGRTRAFADVEMOGALALHVRVOMTLD 2640

CG55069-01 2641 BEKARILEQARQALARAWAREQQRVDRGEGEAGFLWTEGKROLLSAGKQGVQGVYVLS 2700  
CG55069-02 2641 BEKARILEQARQALARAWAREQQRVDRGEGEAGFLWTEGKROLLSAGKQGVQGVYVLS 2700

CG55069-01 2701 VEQYPELADSAIHIQFLQSEIGRR 2720  
CG55069-02 2697 VEQYPELADSAIHIQFLQSEIGRR 2721

